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Title of the Invention: Apparatus for fitting continuous thread-like reinforcement to non-woven belt-like material

Claim 1:

An apparatus for fitting a thread-like reinforcement continuously to a non-woven belt-like material comprising: a headbox, an apparatus supplying fibrous crude slurry and putting this into a flow passing through the headbox, an apparatus having a porous surface which moves and forms belt-like material by receiving slurry from the headbox, and an apparatus supplying the thread-like reinforcement to a slurry flow and inside slurry, conveying the reinforcement to a forming surface and embedding the thread-like reinforcement in the belt-like material integrally.

Constitution:

A high-speed continuous belt-like material forming apparatus has a fibrous crude liquid supplying gate 5, which is pressurized and connected to a pressure headbox 7. The headbox 7 is extended in a direction inclined upward towards a moving, belt-like material forming porous surface such as a Fourdrinier wire belt 8. The forming wire belt 8 is driven at an appropriate speed and is supported on an appropriate roll including a breast roll 9 and couch roll 10. A non-woven belt-like material 17 is formed in the vicinity of the couch roll. The headbox 7 has a slice opening 11 from which raw material liquid is flown to the forming wire belt 8. The forming wire belt 8 is engaged to a drainage sucking apparatus which has a porous plate 12a in a sucking box 12, which is connected to a sucking pump 13, and the tail end of the sucking box 12 is connected to a water collecting container 14.

According to this invention, in the apparatus described above, a thread-like reinforcement 15 is supplied to fibrous crude slurry flow in the headbox 7 and the reinforcement 15 in the slurry in the flow is conveyed to the formed surface 8. The reinforcement is integrally embedded in the fibrous belt-like material formed from the slurry on the formed surface 8.